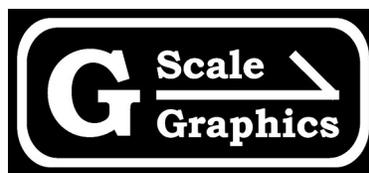
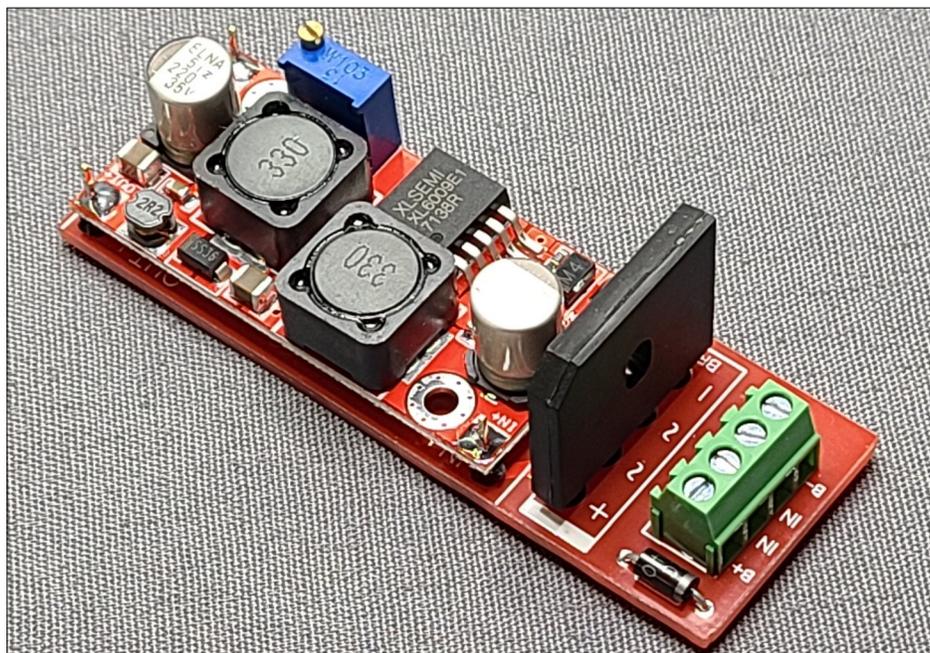


# ***Battery Booster*** **for MyLocoSound** **on Track Power**

**Operation and Installation Manual**



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Revision New: Updated 11/16/2022

## Overview

Your MyLocoSound board requires a back-up battery for use with track power. It continues to power the sound card when your loco stops and there is no track power. If the train is running at sufficient speed (track voltage), the battery will recharge. If the battery is not fully charged, your MyLocoSound board will not produce any sound until the track voltage is greater than about 6V, and then just quit when the loco stops. The most common problem with low batteries is running trains at slow speeds for long periods of time.

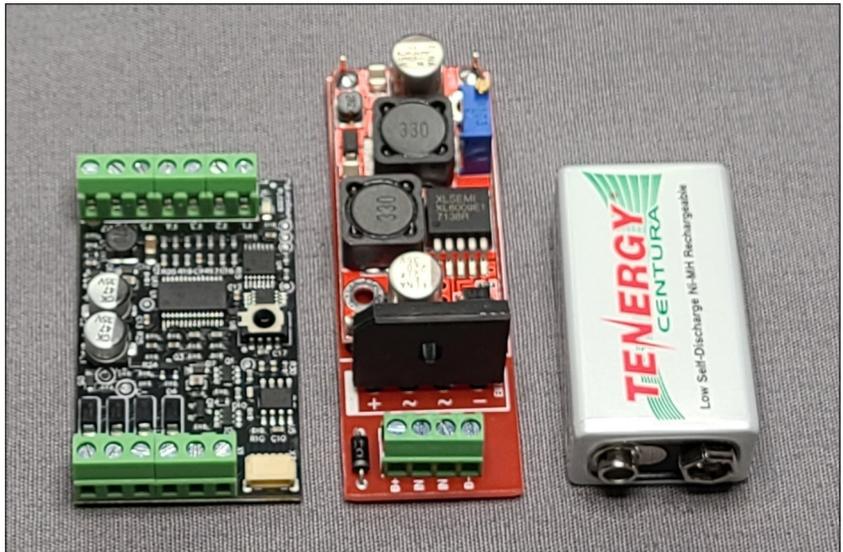
Note: You CANNOT use non-rechargeable batteries with MyLocoSound. It will damage both the battery and the sound board. You can use either 9V or 7.2V NiMh rechargeable batteries only. The latest "Black" MyLocoSound boards allow you to program the battery size for either 9V or 7.2V. You cannot use 7.2V on the older versions. Refer to the MyLocoSound manual to make sure you have the proper setting.

### The Low Battery Problem

A "9 volt" Ni-Mh battery is actually an 8.4V battery composed of 7 nominal 1.2V Ni-Mh cells. During normal operation, a battery charged to about 8.4V, battery charging will start at about 9.4V. So if your normal running speed is greater than 9.4V, no problem. But if you run at slower speeds, this 250 mah battery will be drained in about 5 hours of run time.

This problem can be improved somewhat by replacing the 9V battery with a 7.2V, 800mah Ni-Mh battery. At the nominal 7.2V, charging will now start at speeds greater than 8.2V. Not a huge improvement, but it may be enough. The other benefit is the 800mah capacity, which means you can now run for about 16 hours at slow speeds.

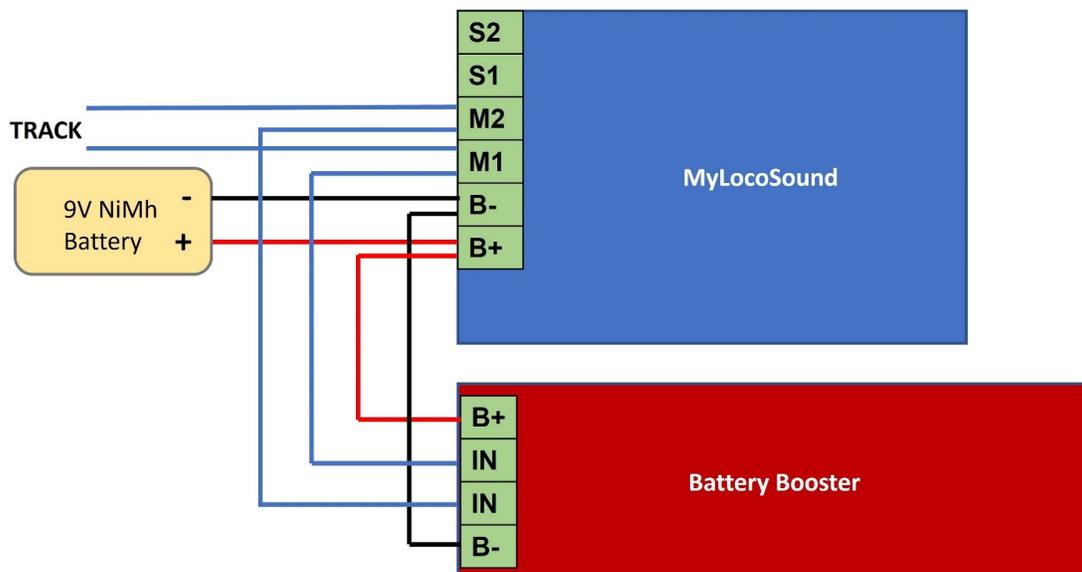
The G-Scale Graphics Battery Booster board will start charging your MyLocoSound battery at a track voltage of 5.0V, making it ideal for low speed running.



## Installation

### Wiring

The Battery Boost board is powered via track power and its output is connected to the battery.



## Operation

Track Voltage	Sound powered from	Battery
0-5V	9V Battery	Discharging
5-10V	Track Voltage	Charging via Battery Booster
10V and up	Track Voltage	Charging via MyLocoSound

## Adjustment

The Battery Boost board is set for 9.5VDC output when shipped, intended for charging a 9V NiMh battery. Output voltage is continuously adjustable from 2-35VDC, for any input voltage 5-32VDC, using the blue 22 turn potentiometer. Output setting for use with a 7.2V NiMh battery should be 7.7VDC.

The easiest way to adjust the output voltage is to remove the board from the loco, battery disconnected. Power it with any DC voltage source available; power pack, power supply, or battery. Any voltage 5-32V can be used. Monitor the output using a voltmeter.

While installed in a loco, disconnect the battery, and power it via track power and test rollers.

## Battery Boost Specifications

### Mechanical

Physical Size: 2.8" X 1.0" X 0.9"H.

Mount using double sided foam tape.

Wiring: Screw terminals accept tinned 22 AWG wire.

### Electrical

Terminals: IN,IN

Track Power Input (DC or PWM): 5 to 32 VDC

Accepts polarity reversals via full wave bridge rectifier

Terminals: B+,B-

Battery Output

Adjustable 2-35VDC, 1 amp, via 22 turn trim potentiometer

Buck/Boost Converter, i.e. output will remain constant for any input 5-32VDC.

Back flow protection